



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: M. Nandakumar et al.

Examiner: Edgardo Ortiz

Serial No.: 09/876,292

Art Unit: 2815

Filed: 06/07/2001

Docket: TI-31089

For: **ADDITIONAL N-TYPE LDD/POCKET IMPLANT FOR IMPROVING
SHORT-CHANNEL NMOS ESD ROBUSTNESS**

#8/Response
1/15/03
John Th

AMENDMENT PURSUANT TO 37 CFR 1.115

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Date of Deposit: December 26, 2002

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Sir:

Responsive to the Office Action of October 4, 2002, favorable reconsideration and allowance of the application are respectfully requested.

The rejection of claims 1-11 for double patenting over the claims of U.S. 6,452,236 is respectfully traversed, since the claims of the present application are in fact directed to an inventive improvement over the claims of 6,452,236. Note specifically that present claim 1 includes the following limitation not found in the prior patent:

"said shallow regions surrounded in part by an enhanced doping implant region of the first conductivity type"

The purpose of this enhanced doping implant region is to increase the current gain of the parasitic lateral bipolar transistor, in an ESD event, which initiates thermal breakdown, thereby improving ESD robustness, as stated in the specification at page 5, lines 24-28.



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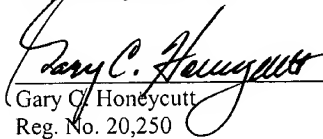
The Office Action wrongly dismisses this improvement with the unsupported assertion that "it is a known practice to include doping implant regions surrounding lightly doped active regions . . . to suppress short-channel effect." The Examiner fails to cite any reference that would substantiate or clarify his opinion. However, even assuming the Examiner may be correct regarding the suppression of a "short-channel effect," it is still an irrelevant position.

Applicants have discovered a radically different purpose for the present enhanced doping implant region, not related to a "short-channel effect." Moreover, Applicants' added region is neither structurally nor functionally equivalent to any region previously used to suppress any short-channel effect, if there is any such prior art region (not cited).

Nothing in the prior art suggests Applicants' claimed improvement over U.S. 6,452,236. Therefore, the rejection is improper and should be withdrawn.

Applicants now believe the application is in condition for allowance.

Respectfully submitted,


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Dated: December 26, 2002

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